

SUPPORT FOR THE AMENDMENTS

This Amendment amends the specification; cancels withdrawn Claims 13-24; and amends Claims 1-2. Support for the amendments is found in the specification and claims as originally filed. In particular, support for Claims 1-2 is found in the specification at least at page 5, line 32 to page 6, line 2; at page 9, lines 1-5; and at page 11, lines 5-8. No new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 1-12 will be pending in this application. Claim 1 is independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

Applicants thank the Examiner for the courtesies extended to their representative during the personal interview on April 16, 2008.

As discussed at the personal interview, the present invention relates to a monolithic multilayer actuator made of a piezoceramic or electrostrictive material, with the actuator being formed as a stack arranged in a quasi mechanical series connection of a plurality of piezoplates by sintering of green foils. Specification at page 1, lines 7-10. By incorporating into the actuator structure along the actuator axis microdisturbances that control crack growth, and permit transmission of pressure, but not tensile stress, an actuator can be made with high reliability and long term stability that is capable of withstanding high pressure forces with a small actuator cross-section. Specification at page 4, lines 12-16; page 5, lines 1-6.

Claims 1-2 and 11 are rejected under § 35 U.S.C. 103(a) over U.S. Patent No. 5,237,239 ("Inoue").

Claims 7 and 9-10 are rejected under § 35 U.S.C. 103(a) over Inoue in view of U.S. Patent No. 6,411,018 ("Heinz").

Inoue discloses a piezoelectric actuator containing a plurality of grooves (slits) on the outer side surface of the actuator body. Inoue at abstract; column 2, lines 40-41. Inoue discloses that each slit has a width in the lamination direction of 5 μm . Inoue at column 7, lines 58-59.

However, Inoue's slits do not permit transmission of pressure from the actuator body on one side of the slit to the actuator body on the other side of the slit. Inoue fails to suggest the independent Claim 1 limitation that "the microdisturbances permit transmission of pressure, but not tensile stress ...".

Heinz fails to remedy the deficiencies of Inoue with respect to independent Claim 1. The Office Action cites Heinz against dependent Claims 7 and 9-10 for disclosing a piezoelectric actuator with a net-like or woven cloth-like external electrode.

Because the cited prior art fails to suggest all the limitations of independent Claim 1, the rejections under § 35 U.S.C. 103(a) should be withdrawn.

The disclosure is objected to. To obviate the objection, the specification is amended by deleting references to claims.

Claims 1-12 are rejected under § 35 U.S.C. 112, first paragraph, as assertedly failing to comply with the enablement requirement. To obviate the rejection, Claim 1 is amended as suggested by the Office Action to recite "wherein additionally ~~the basic-metallic coating~~ and/or the external contact is formed elongation-resistant or elastic at least in the area of the microdisturbances".

Claims 1-12 are rejected under § 35 U.S.C. 112, second paragraph. To obviate the rejection, Claims 1-2 are amended.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

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